

The **converse** of a statement can be found by switching the premise and the conclusion.

converse

A statement formed by switching the premise and conclusion of another statement.



Practice Run

Original Statement

- *If a transversal crosses two parallel lines, the corresponding angles are equal.*

Converse

- *If equal corresponding angles are formed when a transversal crosses two lines, the lines must be parallel.*

Explain whether or not you agree with the converse.



Compare your answers.

Original Statement

- *If a transversal crosses two parallel lines, the corresponding angles are equal.*

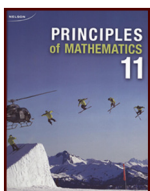
Converse

- *If equal corresponding angles are formed when a transversal crosses two lines, the lines must be parallel.*

Explain whether or not you agree with the converse.

The converse is true and can be used to show that the lines must be parallel.

Explanations will vary. One justification is that corresponding angles of the same size mean that the lines intersected by the transversal must be pointing in the same direction and will therefore never meet.



For further information about proofs of angle relationships see pp. 75 – 76 of *Principles of Mathematics 11*.